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EXAMINER

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

REJECTION OF CLAIMS OVER PRIOR ART

Claims 60 and 62 are rejected under 35 U.S.C. 102(b) as being anticipated by Gerspacher (4,143,209). See claims 9-12 in Gerspacher where the end product comprises a metal wire having a steel core with a brass coating and can be made into a plurality of wires that are stranded together to form a cord or cable (see also column 3, lines 31-55, of Gerspacher). Thus, the final product is shown by the prior art.

[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.” In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) (citations omitted) (Claim was directed to a novolac color developer. The process of making the developer was allowed. The difference between the inventive process and the prior art was the addition of metal oxide and carboxylic acid as separate ingredients instead of adding the more expensive pre-reacted metal carboxylate. The product-by-process claim was rejected because the end product, in both the prior art and the allowed process, ends up containing metal carboxylate. The fact that the metal carboxylate is not directly added, but is instead produced in-situ does not change the end product.) See MPEP 2113.

Claims 60 and 62 are further rejected under 35 U.S.C. 102(b) as being anticipated by Sawada (4,859,822). See Figure 3 where the metal wire 101 has a metal core 201 and a coating 103. A plurality of wires can be placed together and stranded together (see Example 6). See the above comments relating to the product made by the process.

Claims 32-62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gerspacher (4,143,209) in view of Sawada (4,859,811). Gerspacher discloses at column 2, lines 15-39) the basic claimed method of forming a coated metal wire by thermally treating the metal core, submitting the core to a surface treatment (cleaning/pickling/water rinsing) to prepare the core

Art Unit: 3725

for coating, coating the metal core with a metal coating and drawing the metal-coated metal core to reduce the diameter of the coated core to a finely coated wire. The metal core initially has a diameter of 0.9 to 1.4 millimeters and the final diameter of the coated wire is in the range of 0.08 to 0.40 millimeters. In light of this large reduction in diameter of the wire from its initial size to its final size, it is evident that the final wire will have a smaller coating thickness than originally provided and a smaller core diameter than originally provided. While Gerspacher uses an electroplating process for obtaining the adhesion of the coating to the core, it is common in this art to use other coating provisions that facilitate greater adhesion advantages resulting in high purity and high quality. Thus, impurities are reduced by using a vapor phase coating process along with an improvement in the draw down of the wire. Sawada shows a plasma deposition to be commonly used for this purpose and advantage (see Sawada at column 2, lines 48-68).

Accordingly, it would have been obvious to the skilled artisan at the time of the invention to have modified Gerspacher's coating process by using a plasma or sputtering deposition process for the above noted motivation. The speed would have been selected based upon available hardware and desired finishing outcomes. This has not been disclosed as a critical provision.

The manner of drying, i.e., by a blower, would have been within the purview of the skilled artisan. Claim 40 is considered inherently performed by Sawada's plasma CVD or chemical vapor deposition or sputtering vapor phase method (see Sawada at column 3, lines 26-33).

Similarly, the pressures would have been obvious ranges barring any critical features. Sawada shows two coating chambers at 14. Descaling is commonly performed in the coating art to provide a clean surface for the coating. As to the different dimensions, i.e., thickness, diameters, it is the examiner's position that Gerspacher teaches the basic dimensional variations

in the initial and final shaping operations by virtue of the fact that the core is coated with a predetermined thickness that results in a finely coated wire having a final diameter of 0.25 mm (see column 4, lines 21-23) with a coating thickness of around 10 Angstroms. The completed product of claims 60 and 62 is taught by the combined teachings of Gerspacher and Sawada.

RESPONSE TO APPLICANTS' COMMENTS

Applicants take issue with the examiner's position that claims 60 and 62 are product-by-process claims. It is applicant's position that the examiner's holding is incorrect and that claims 60 and 62 are *not* product-by-process claims. Interestingly, applicant fails to note what these claims are. If they are not product-by-process claims, are they product claims or are they process claims? Applicant merely discusses the infringement test to determine their suitability. Further, applicant maintains that since claims 60 and 62 depend either directly or indirectly from the independent process claim 32, they are properly related as an independent claim and a dependent claim. Accordingly, applicant indicates that it is not possible to infringe the dependent claims without also infringing the independent claim. Thus, applicant states that all of the subject matter of the dependent claims 60 and 62, the article features, must include the subject matter of claim 32, the method claim. Applicant points to MPEP 608.01(n)(III) for support for this position. While the MPEP does discuss the above, it is the examiner's position that the purpose of such ruling in the MPEP is for the purpose of determining whether a dependent claim is a *proper* dependent claim. In this regard, the infringement test is used to determine this. Nothing more or nothing less is used in this section of the MPEP. This section of the MPEP is not used to determine the applicability of the prior art against claims. In accessing the prior art against the

Art Unit: 3725

claims, the examiner has properly followed the guidelines by determining patentability based on the product itself. The above court decision cited in the above rejection fully supports the examiner's handling of the claims relative to the prior art. In this regard, if the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.

In response to applicants' argument that Sawada is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicants was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Sawada and Gerspacher are both directed to manufacturing problems of coating wire where the material is processed subsequent to the coating by drawing. The fact that Gerspacher deals with making wire for the tire industry does not preclude the applicability of Sawada's teaching where Sawada is used in the electrical field because of the common manufacturing features. Furthermore, and contrary to applicants' argument, it is the examiner's position that the fields of endeavor overlap and are clearly ones that the skilled artisan would have been expected to look. This is so because the skilled artisan working in the wire treatment field would clearly have been expected to look to wire processing whether the wire is ultimately used in differing fields. The fact that the use of the end products made by Gerspacher and Sawada's processes differs does not detract from this position. Both teachings are directed to wire working that deals with processing of wire so that the wire can be coated, treated and drawn into coated wire. The skilled artisan having a level of skill within this art would have been expected to look to the arts involving the processing of wire regardless of

Art Unit: 3725

how the processed wire may or may not be used once manufactured in the manufacturing plant.

Accordingly, the fields of endeavor for Gerspacher and Sawada are not divergent.

As to the rejection of the claims over Gerspacher and Sawada, this combination is considered tenable. Applicants note that the claims must be considered as a whole. This has been done since the applied prior art has only been combined based upon the clear motivation to do so. The combination of Sawada with Gerspacher has not relied upon hindsight because the motivation to combine has been established by the two teachings. In this regard, Gerspacher teaches the basic claimed process where an electrodeposition coating process is used to adhere the coating to the metal core. However, Sawada proffers the use of plasma vapor or sputtering as an improved adhering coating technique within the art of drawing coated wire in manufacturing. Furthermore, Sawada notes the disadvantages to “other coating methods” (column 2, line 49) and, consequently, envisions a vapor phase coating to give better results than the “other coating methods”. Sawada teaches that improved adhesion (column 3, lines 26-40), high quality, high purity (column 2, lines 50 and 54) and cleanliness are foreseen. By virtue of the fact that multiple drawing of the CVD coated wire can attain severe thinning of the wire without breakage, better draw-down features (column 2, lines 55 and 56) are evident. Thus, the skilled artisan having the benefit of Sawada’s teaching where vapor phase coating is advantageous over “other coating methods” would have been motivated to have modified Gerspacher’s “other coating method” of electrodeposition by using a vapor phase coating method. The motivation and suggestion to combine is clearly made evident to the skilled artisan having the benefit of the teachings.

Applicants further argue that the skilled artisan would not look to the art of vapor depositing a coating on a core with a metal of the same metal as the core as taught by Sawada in electroplating of brass to steel wire as taught by Gerspacher. In response to applicant's argument that one would not look to Sawada's vapor deposition of a coating to a core of similar metal to the core in an electrical product to the electroplating of brass to steel core for rubber products, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have *suggested* to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). In this regard, the objectives of Sawada's teachings clearly make evident to the skilled artisan the advantage and objective to coating using vapor deposition (sputtering) or chemical vapor deposition (plasma CVD). Sawada makes this clear at column 3, lines 29-33, where

“(i)f the coating is done by sputtering, a wide variety of material can be deposited on the core wire with high adhesive strength. Coating by chemical vapor deposition uses a gas which can be easily refined, so that deposition with a high purity and high quality is possible”.

Furthermore, Sawada makes it evident at column 2, lines 48-50, that

“coating by vapor phases method, as compared with that obtained by other coating methods, makes it easy to attain a high quality and cleanliness”.

Accordingly, it is not the intent that the teachings of the Sawada teaching be bodily incorporated into the Gerspacher teaching but rather the features suggested by Sawada. Therefore, the skilled artisan having the benefit of the vapor deposition objectives taught by Sawada would have been disposed to coat Gerspacher's brass to the steel core using these objectives and, thus, obtaining the advantages to such an improved coating.

Therefore, it is the examiner's position that the applicability of the prior art against the claims is tenable and proper.

INQUIRIES

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner D. Crane whose telephone number is **(571) 272-4516**. The examiner's office hours are 7:00AM-3:30PM, Monday through Friday. The examiner's supervisor, Derris Banks, can be reached at **(571) 272-4419**.

Documents related to the instant application may be submitted by facsimile transmission at all times to Fax number **(571) 273-8300**. Applicant(s) is(are) reminded to clearly mark any transmission as "DRAFT" if it is not to be considered as an official response. The Examiner's Fax number is **(571) 273-4516**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DCCrane
May 27, 2008

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Group Art Unit 3725

Application/Control Number: 10/537,173
Art Unit: 3725

Page 9